CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 94-032

AMENDMENT OF ORDER 91-137
SITE CLEANUP REQUIREMENTS FOR:

NATIONAL SEMICONDUCTOR CORPORATION
UNITED TECHNOLOGIES CORPORATION
HEWLETT-PACKARD, AND SHAHINIAN TRUST
SUBUNIT 1, OPERABLE UNIT 1
SANTA CLARA AND SUNNYVALE
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. Study Area, Operable Unit 1 and Subunit 1 Locations and Descriptions A Study Area containing numerous sources of soil and ground water pollution in eastern Sunnyvale is shown in Figures 1 and 2. This Study Area has been divided into Operable Units 1 and 2 (OU1 and OU2) because of additional field work necessary to define the extent of ground water pollution plumes originating from facilities in OU2 and to determine the extent that these pollution plumes may be commingled with those plumes originating from facilities in OU1. OU1 comprises the eastern portion of the Study Area and OU2 comprises the western portion, as shown in Figures 1 and 2.

   The purpose of defining these two operable units is to allow facilities in OU1 to proceed with final cleanup while further characterization work in OU2 is completed. The final cleanup plans for the facilities and subunits in OU1 were adopted by the Board in September 1991 (Order Nos. 91-137, 91-139, and 91-140). Site Cleanup Requirements specifying further characterization work for facilities and three subunits in OU2 were adopted by the Board in October 1993 (Order Nos. 93-135, 93-136, 93-137).

   OU1 has been subdivided into three subunits as shown in Figure 1. Subunit 1 currently consists of the National Semiconductor Corporation (NSC) facility at 2900 Semiconductor Drive, Santa Clara, the former United Technologies Corporation (UTC) facility at 1050 E. Arques Avenue, Sunnyvale, and the downgradient area to Arques Avenue. This Order expands Subunit 1 to include the southeastern parking lot of the Canadian Aviation Electronics-Link Corporation (CAE-Link) site at 1077 E. Arques Avenue, Sunnyvale, to the north of the

former UTC facility.

2. Regulatory Status for Operable Unit 1, Subunit 1 The intent of actions required in Order No. 91-137 is to expedite cleanup of ground water in Subunit 1, prevent movement of polluted ground water to other subunits, and to prevent vertical migration into aquifers that currently serve as drinking water sources.

   The intent of this Order is to expand Subunit 1, as provided for in Order No. 91-137, to include the southeast corner of the CAE-Link site located immediately north of the former UTC facility. This expansion of Subunit 1 is based on information which indicates that groundwater pollution caused by releases at the former UTC facility appears to be migrating beneath a portion of the CAE-Link site. Remedial investigations required in this Order will provide for the acquisition of adequate information upon which final remedial actions can be based.

3. Operable Unit 1, Subunit 1 Boundary As specified in Order No. 91-137, Operable Unit 1, Subunit 1 consists of the NSC facility, the former UTC facility, and the area extending northward to Arques Avenue. The area added to Operable Unit 1, Subunit 1 by this Order is located at the northwest corner of Santa Trinita Avenue and E. Arques Avenue in Sunnyvale, Santa Clara County (Figure 1). This additional area serves as a parking lot for the currently vacant CAE-Link site located at 1077 E. Arques Avenue.

4. History of Area Added to Operable Unit 1, Subunit 1 CAE-Link and predecessor companies have leased the 1077 E. Arques site since the 1960s. CAE-Link utilized the northern portion of the site (which is not part of OU1, Subunit 1) for the development of aeronautical flight simulation. The southern portion of the site (which includes the area added to OU1, Subunit 1) served as a parking lot for the site. According to CAE-Link personnel, no hazardous materials were stored, utilized, or disposed within the southern portion of the site.

5. Subunit 1, Operable Unit 1 Dischargers Ground water pollution emanating from the former UTC facility appears to have migrated beneath the southern area of the CAE-Link site, and may be potentially intermingling with pollution plumes caused by releases at the CAE-Link facility and/or at the 999 Arques Corporation site. The additional soil and ground water investigation required by this Order is partially intended to define the source and extent of pollution in this portion of the Study Area.

   As specified in Order No. 91-137, Finding 2, NSC has assumed full responsibility to complete all necessary soil and ground

water remedial action programs related to the former UTC facility and the ground water plume emanating from that facility. UTC and Hewlett-Packard (HP), as specified in Order No. 91-137, are secondarily liable and have responsibility for the soil and ground water cleanup only in the event that NSC fails to comply with prohibitions, specifications, and provisions of Order No. 91-137 and this Order. NSC, UTC, and HP are hereinafter referred to as dischargers.

As further specified in Order No. 91-137, Finding 2, Shahinian Trust owns Building 19 at the NSC facility and is secondarily responsible for the cleanup of soil and ground water pollution emanating from that building's source area only.

6. Soil Pollution at the Addition to Subunit 1, Operable Unit 1 Elevated levels of trichloroethylene (TCE) and dichloroethylene (DCE) have been detected in soil samples obtained from the eastern portion of the CAE-Link parking lot. Soil gas surveys indicate elevated levels of VOCs in the eastern portion of the area, along Santa Trinita Avenue, extending northward. It has not been determined whether soil pollution detected within the eastern portion of the CAE-Link parking lot is the result of either: 1) a near-surface release from the CAE-Link site, 2) volatilization of pollutants from ground water pollution migrating from the former UTC facility and/or other off-site sources, or 3) both a near-surface release and volatilization of migrating off-site pollutants. The additional remedial investigation required by this Order will help make this determination.

7. Ground Water Pollution at the Addition to Subunit 1, Operable Unit 1 VOCs have been found in A and B aquifer ground water samples taken from the area added to Subunit 1, the most predominant of which are TCE, DCE, and trichloroethane (TCA). The highest concentrations of VOCs, primarily TCE, up to a concentration of 575 parts per billion (ppb), were detected in ground water samples collected from wells screened in the A aquifer zone in the area added to Subunit 1. TCE was detected at levels up to 580 ppb in ground water samples collected from the B aquifer. As specified in Order 91-137, Finding 15, the principal organic chemicals detected in the soil at the former UTC facility are TCA and TCE. Higher concentrations of VOC pollution have been detected in both the A and B aquifers at the upgradient, former UTC facility. In addition, releases from the 999 Arques site in Subunit 1 of Operable Unit 2 appear to have migrated beneath the CAE-Link parking lot in the B-1 aquifer. Pollution sources are also present in other upgradient sites, and these sources may have impacted groundwater in the area added to Subunit 1.

It has not been determined whether ground water pollution detected within the area added to Subunit 1 is the result of

migration of a ground water pollution plume from the former UTC facility and/or other off-site sources only, or both a near-surface release within the area of the CAE-Link parking lot and migration of a ground water pollution plume from off-site sources.

8. Operable Unit For the purposes of this Order the operable unit consists of the soil and ground water beneath the entire expanded Subunit as outlined in the shaded area on Figure 1.

9. Scope of this Order On September 18, 1991, the Board adopted Order No. 91-137 which updated previous Site Cleanup Requirements for the NSC and former UTC facilities (Orders 86-73 and 89-62), and comprise the final cleanup plan for Operable Unit 1, Subunit 1.

   The intent of this Order is to provide for the expansion of Subunit 1 to include the CAE-Link eastern parking lot within Site Cleanup Requirements for Operable Unit 1, Subunit 1. This Order prescribes a time schedule both to completely define the source and extent of pollution in the expanded Subunit 1 and implement final remedial actions for the area added to Subunit 1.

10. Study Area and Operable Unit Boundaries The necessity for additional field work in the expanded area of Subunit 1 of OU1 and in OU2 renders the boundaries of the Study Area and both Units inexact because additional information generated for OU1 and OU2 may alter the Units' boundaries. It is the Board's intent that the boundaries of the Units be defined such that, commingling notwithstanding, facilities located in OU1 are largely responsible for soil and ground water pollution in OU1, and facilities located in OU2 are largely responsible for soil and ground water pollution in OU2. As additional information is generated for the Study Area, this intention may lead the Board to modify the Units' boundaries, this Order, and the list of dischargers named in this Order.

    The source(s) of OU2, Subunit 4 ground water pollution have not yet been determined. Subunits 1, 2, and 3 of Operable Unit 2, Subunit 1 of Operable Unit 1, and other sites in the area are considered potential contributors to OU2, Subunit 4 ground water pollution. This Order, Orders for OU2 sites, and forthcoming orders for the Study Area, provide for the collection of information necessary to determine the parties responsible for completion of OU2, Subunit 4 investigation and cleanup. The Board anticipates that OU2, Subunit 4 responsible parties will be named after the completion of the remedial investigations required in this Order, Orders for OU2 sites, and orders for appropriate sites adjacent to OU1 and OU2.

11. Other Potential Contributors to OU1 and OU2 Pollution That Are Sources of Soil and/or Ground Water Pollution Several facilities exist near OU1 and OU2 that are sources of soil and/or ground water pollution. These facilities include, but may not be limited to, Hewlett-Packard, located at 974 E. Arques Avenue; Sunnyvale Corporation Yard, located at 221 Commercial Street; Pilkington/Barnes-Hind, located at 895 Kifer Road; and Mohawk Laboratories, located at 932 Kifer Road.

The Board has adopted orders requiring further characterization and cleanup of ground water for Hewlett-Packard, Pilkington/Barnes-Hind, and Mohawk Laboratories. The Board intends to update existing orders and adopt new orders for additional sites in the Study Area. As additional information is generated for these and other facilities in the Study Area, the Board may modify the boundaries of OU1 and OU2, this Order and the list of dischargers named in this Order.

12. This action is an order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the CEQA pursuant to Section 15321 of the Resources Agency Guidelines.

13. Pursuant to Section 13304 of the Water Code, the dischargers are hereby notified that the Board is entitled to, and may seek reimbursement for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. Upon receipt of a billing statement for such costs, the dischargers shall reimburse the Board.

14. The Board has notified the dischargers and interested agencies and persons of its intent under California Water Code Section 13304 to prescribe amendments to the Site Cleanup Requirements for the discharge and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.

15. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the dischargers shall cleanup and abate the effects described in the above findings in compliance with Order No. 91-137, as amended by this Order as follows:

1. Add the following tasks to Provision C. of Order No. 91-137:

q) TASK 17 - REMEDIAL INVESTIGATION WORKPLAN Submit a technical report acceptable to the Executive Officer, which evaluates previous technical data and includes a workplan for additional soil and ground water investigation in order to completely define the sources and extent of pollution within and emanating from the area added to Subunit 1. The workplan should also include a ground water monitoring and sampling plan for the area added to Subunit 1.

COMPLETION DATE: March 1, 1994

r) TASK 18 - IMPLEMENTATION OF REMEDIAL INVESTIGATION Submit a technical report acceptable to the Executive Officer documenting implementation of the remedial investigation identified in Task 17. The report should include documentation of the occurrence of field investigations performed pursuant to the Remedial Investigation Workplan. Information regarding the results of the investigations performed, such as boring logs, CPT logs and laboratory analytical reports will not be required in this submittal.

COMPLETION DATE: May 1, 1994

s) TASK 19 - COMPLETION OF REMEDIAL INVESTIGATION REPORT Submit a technical report acceptable to the Executive Officer, pursuant to the remedial investigation workplan identified in Task 17, containing the results of the remedial investigation. Upon review and approval of the Remedial Investigation Report by the Executive Officer, the parties named in this order and required to meet the remaining provisions of this Order may be modified based on their respective contributions to the Subunit's pollution.

COMPLETION DATE: July 1, 1994

t) TASK 20 - COMPLETION OF FEASIBILITY STUDY REPORT AND PROPOSED REMEDIAL ACTION PLAN Submit a technical report acceptable to the Executive

Officer, based on the results of the remedial investigation submitted for Task 19, containing the feasibility study and proposed remedial action plan. The remedial actions proposed should be consistent with Order No. 91-137, Finding 24 and should remediate groundwater to cleanup levels specified in Order No. 91-137, Specification B.3. A time schedule necessary to implement the proposed remedial actions should be included.

COMPLETION DATE: November 1, 1994

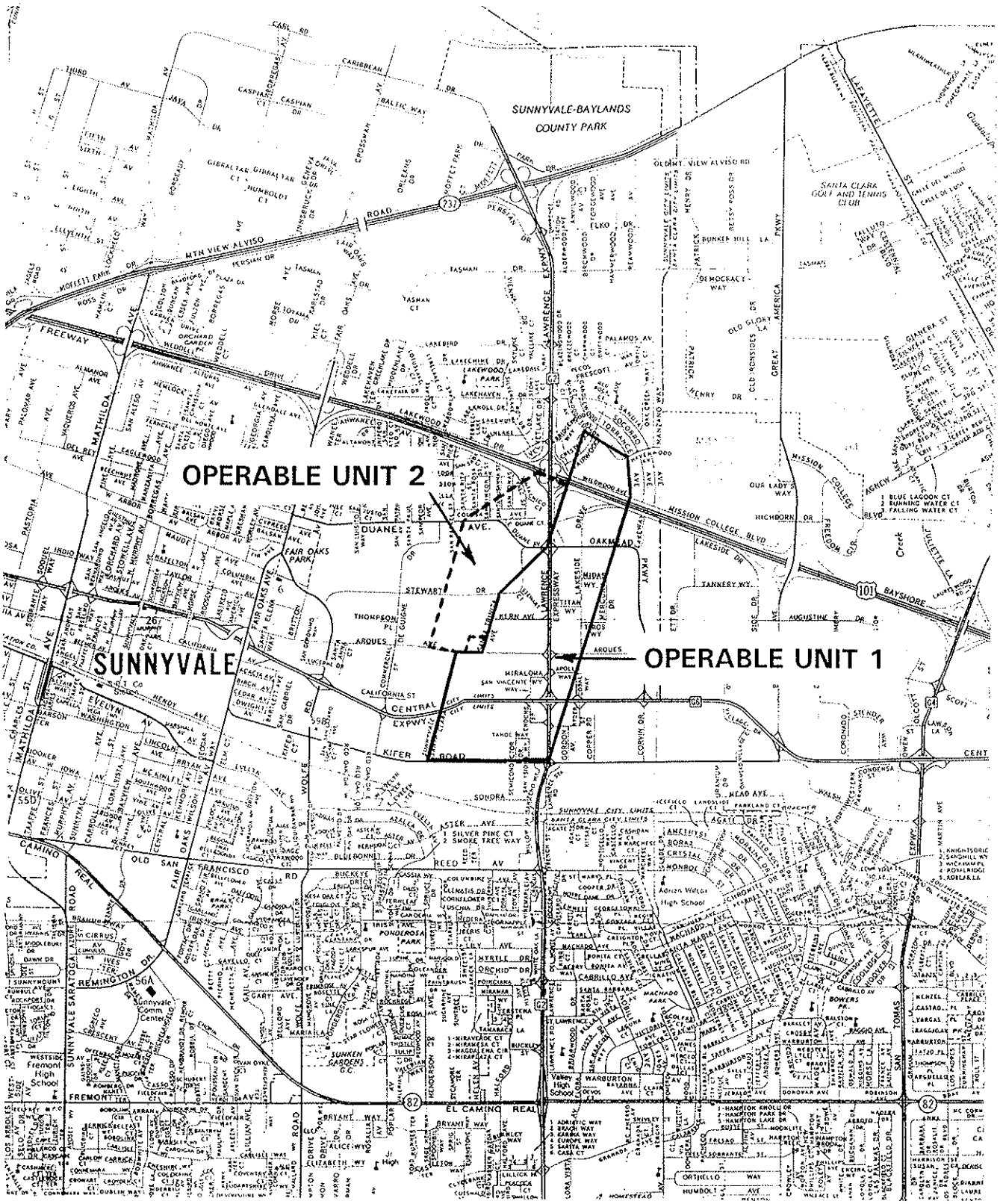
2. Revise Provision C.15. of Order No. 91-137 to read as follows:

> The dischargers shall reimburse the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order, upon receipt of a billing statement for such costs.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on February 16, 1994.

Lawrence P. Kolb
for
Steven R. Ritchie
Executive Officer

Attachments:
Figure 1. Study Area Map
Figure 2. General Location Map

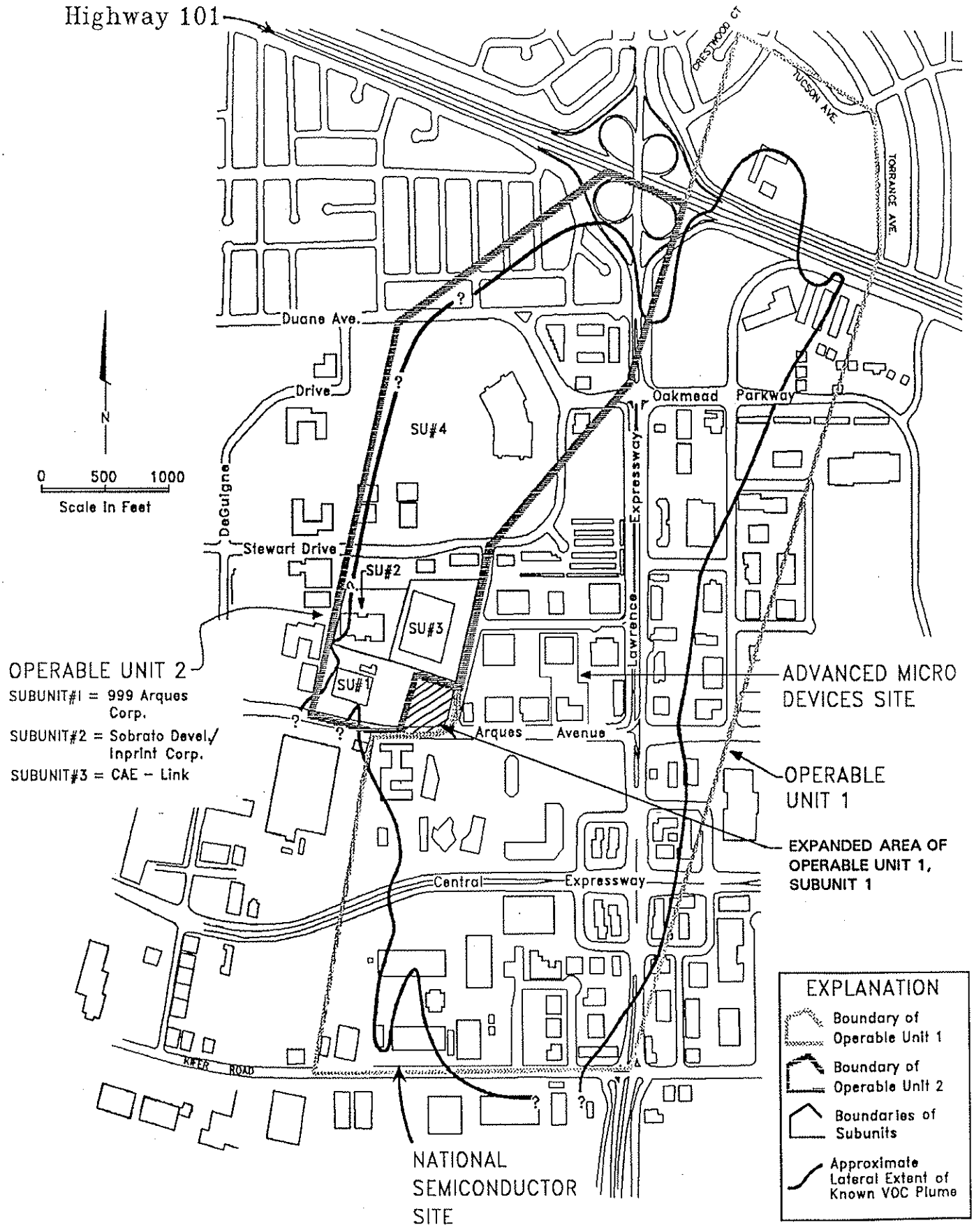


BASE MAP: H.M. GOUSHA CO., 1990

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

FIGURE 2

GENERAL LOCATION MAP



EASTERN SUNNYVALE, CA

FIGURE 1
STUDY AREA